

इंटरनेट

मानक

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“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 4586-2-1 (1980): Dimensions of spindles and mounting arrangements for spindle operated electronic components, Part 2: Mounting arrangements, Section 1: Components and panels cut-outs [LITD 3: Electromechanical Components and Mechanical Structures for Electronic Equipment]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”



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*Indian Standard*  
**DIMENSIONS OF SPINDLES AND MOUNTING  
ARRANGEMENTS FOR SPINDLE OPERATED  
ELECTRONIC COMPONENTS**  
**PART II MOUNTING ARRANGEMENTS**  
Section 1 Components and Panel Cut-outs  
( *First Revision* )

**1. Scope** — Covers dimensions for following types of mounting arrangements:

- a) Single bush mounting with panel lug on mounting face,
- b) Single bush mounting with single and double flatted bush, and
- c) Single hole bush mounting with panel lug on bush.

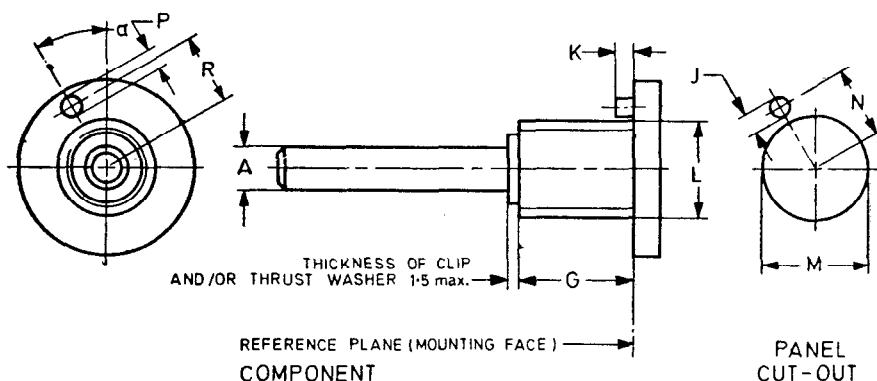
1.1 It does not cover chassis fixing arrangements.

**2. Dimensions** — See Tables 1, 2 and 3.

2.1 *Bush Threadings* — Details are specified in Tables 1, 2 and 3.

**TABLE 1 DIMENSIONS OF SINGLE BUSH MOUNTING WITH PANEL LUG ON MOUNTING FACE**  
(Clause 2)

All dimensions in millimetres.



Spindle Dimension <i>A</i> (1)	Component				Panel Cut-out		
	Thread Dimension <i>L</i> (2)	Dimension <i>G, Min</i> (3)	Dimension <i>K</i> (4)	Dimensions <i>P and R</i> (5)	Dimension <i>M</i> (6)	Dimension <i>J</i> (7)	Dimension <i>N</i> (8)
2	M5 × 0.5	No Bush 4 5 7 10	1.0 ± 0.2	Shall be specified by the relevant specification for the component, such that the angular positional tolerance does not exceed ±2½° (±4° for <i>A</i> = 2) and such that mountability is ensured.	5.1 <sup>+0.12</sup> -0	2.0 <sup>+0.1</sup> -0	6.0 ± 0.1
3	M6 × 0.75 M7 × 0.75*		1.0 ± 0.2 1.5 ± 0.2		6.1 <sup>+0.15</sup> -0 7.1 <sup>+0.15</sup> -0	3.5 <sup>+0.12</sup> -0	9.5 ± 0.1
	4		M7 × 0.75		1.0 ± 0.2 1.5 ± 0.2 2.0 ± 0.2	7.1 <sup>+0.15</sup> -0	3.5 <sup>+0.12</sup> -0
6	M9 × 0.75 M10 × 0.75*		1.0 ± 0.2 1.5 ± 0.2 2.0 ± 0.2		9.1 <sup>+0.18</sup> -0 10.1 <sup>+0.18</sup> -0	3.5 <sup>+0.12</sup> -0 4.5 <sup>+0.12</sup> -0	9.5 ± 0.1 13.5 ± 0.1 15.0 ± 0.1
	8		M12 × 0.75*		1.0 ± 0.2 1.5 ± 0.2 2.0 ± 0.2	12.1 <sup>+0.18</sup> -0	3.5 <sup>+0.12</sup> -0 4.5 <sup>+0.12</sup> -0
10	M15 × 1.0 M16 × 1.0*		1.0 ± 0.2 1.5 ± 0.2 2.0 ± 0.2		15.1 <sup>+0.18</sup> -0 16.1 <sup>+0.18</sup> -0	3.5 <sup>+0.12</sup> -0 4.5 <sup>+0.12</sup> -0	13.5 ± 0.1 15.0 ± 0.1

**Note 1** — The angular position of the lug ( $\alpha$ ) shall be specified by the relevant specification for the component.

**Note 2** — Two symmetrical lugs may be used.

**Note 3** — The shape of the lug is optional within dimension *P*.

**Note 4** — The minimum panel thickness shall be specified by the relevant specification for the components such that a minimum threaded length of 3 mm is available.

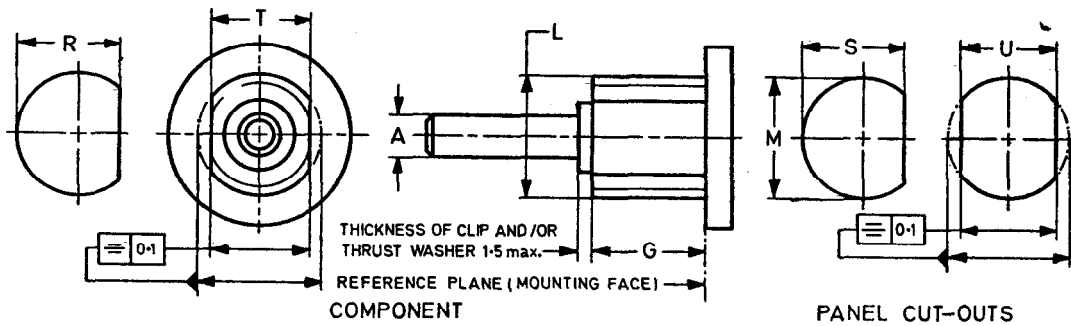
**Note 5** — If required by the relevant specification for the component, the lug may be omitted, in which case the panel cut-out would be simplified.

**Note 6** — All these dimensions include the plating thickness.

**Note 7** — Dimensions marked with asterisks (\*) are preferred thread sizes.

**TABLE 2 DIMENSIONS OF SINGLE BUSH MOUNTING WITH SINGLE DOUBLE FLATTED BUSH**  
(Clause 2)

All dimensions in millimetres.



Spindle Dimension A	Component			Single Flatted Bush		Double Flatted Bush	
	Thread L	Dimension G, Min	Diameter of Mounting Hole Dimension M	Bush Dimension R	Mounting Hole Dimension S	Bush Dimension T	Mounting Hole Dimension U
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
2	M5×0.5	No Bush 4 5 7 10	5.1 <sup>+0.12</sup> -0	*	*	*	*
3	M7×0.75		7.1 <sup>+0.15</sup> -0	6.5 <sup>+0</sup> -0.09	6.55 <sup>+0.09</sup> -0	6.0 <sup>+0</sup> -0.075	6.05 <sup>+0.09</sup> -0
4	M7×0.75		7.1 <sup>+0.15</sup> -0	6.5 <sup>+0</sup> -0.09	6.55 <sup>+0.09</sup> -0	6.0 <sup>+0</sup> -0.075	6.05 <sup>+0.09</sup> -0
6	M10×0.75		10.1 <sup>+0.18</sup> -0	9.25 <sup>+0</sup> -0.09	9.30 <sup>+0.09</sup> -0	8.5 <sup>+0</sup> -0.09	8.55 <sup>+0.09</sup> -0
8	M12×0.75		12.1 <sup>+0.18</sup> -0	*	*	*	*
10	M15×1.0		15.1 <sup>+0.18</sup> -0	*	*	*	*

\*Under Consideration.

**Note 1** — The angular position of the flat(s) on the bush, with respect to the part of the component mounted behind the panel, shall be specified by the relevant specification for the component.

**Note 2** — The double flatted bush is the preferred mounting. With this mounting the angular play should not exceed  $\pm 4^\circ$ .

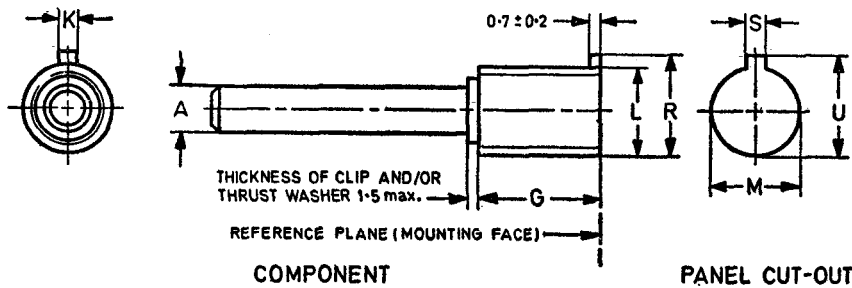
**Note 3** — The minimum panel thickness shall be specified by the relevant specification for the component such that a minimum threaded length of 3 mm is available.

**Note 4** — All these dimensions include the plating thickness.

TABLE 3 DIMENSIONS OF SINGLE HOLE BUSH MOUNTING WITH PANEL LUG ON BUSH

(Clause 2)

All dimensions in millimetres.



Spindle Dimension A (1)	Component				Panel Cut-out		
	Thread Dimension L (2)	Dimension G, Min (3)	Dimension K (4)	Dimension R (5)	Dimension M (6)	Dimension U (7)	Dimension S (8)
2	M5×0.5	No Bush 4 5 7 10	2.0 <sup>+0</sup> -0.1	7.1 <sup>+0</sup> -0.2	5.1 <sup>+0.12</sup> -0	7.2 <sup>+0.3</sup> -0	2.1 <sup>+0.1</sup> -0
3	M7×0.75		2.5 <sup>+0</sup> -0.2	9.1 <sup>+0</sup> -0.2	7.1 <sup>+0.15</sup> -0	9.2 <sup>+0.3</sup> -0	2.6 <sup>+0.1</sup> -0
4	M7×0.75		2.5 <sup>+0</sup> -0.2	9.1 <sup>+0</sup> -0.2	7.1 <sup>+0.15</sup> -0	9.2 <sup>+0.3</sup> -0	2.6 <sup>+0.1</sup> -0
6	M10×0.75		2.5 <sup>+0</sup> -0.2	12.1 <sup>+0</sup> -0.2	10.1 <sup>+0.18</sup> -0	12.2 <sup>+0.3</sup> -0	2.6 <sup>+0.1</sup> -0
8	M12×0.75		2.5 <sup>+0</sup> -0.2	14.1 <sup>+0</sup> -0.2	12.1 <sup>+0.18</sup> -0	14.2 <sup>+0.3</sup> -0	2.6 <sup>+0.1</sup> -0
10	M15×1.0		2.5 <sup>+0</sup> -0.2	17.1 <sup>+0</sup> -0.2	15.1 <sup>+0.18</sup> -0	17.2 <sup>+0.3</sup> -0	2.6 <sup>+0.1</sup> -0

**Note 1** — The angular position of the locating key on the bush, with respect to the component mounted behind the panel, shall be specified by the relevant specification for the component.

**Note 2** — The minimum panel thickness shall be specified by the relevant specification for the component such that a minimum threaded length of 3 mm is available.

**Note 3** — All these dimensions include the plating thickness.

### EXPLANATORY NOTE

This standard (Part II) covers mounting arrangements for spindle operated electronic components. Part I of this standard covers various types of spindles for spindle operated electronic components. Part II has following sections:

- Sec 1 Components and panel cut-outs.
- Sec 2 Fixing nuts.
- Sec 3 Washers (*under preparation*).

This standard (Part II) is based on IEC Pub 620 (1978) 'Dimensions for the mounting of single hole, bush mounted, spindle operated electronic components' issued by the International Electrotechnical Commission.